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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/781,570 | 02/18/2004 | Giovanni Cesura | 02-CA-467/GC | 9296 |

23334 7590 12/20/2005

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EXAMINER

WAMSLEY, PATRICK G

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2819

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------------|---|--|
| Office Action Summary | Application No. 10/781,570 | Applicant(s) CESURA ET AL. (Signature) | |
| | Examiner Patrick G. Wamsley | Art Unit 2819 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-30 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08/16/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

- Page 1, line 17: Change "analog/digital" to -- analog-to-digital --.
- Page 1, line 21: Change "Analog-To-Digital" to -- analog-to-digital --.
- Page 1, line 21: Change "(ADC) converters" to -- converters (ADCs) --.
- Page 4, line 1: Change "sigma-delta" to -- sigma-delta ($\Sigma\Delta$) --
- Page 4, line 1: Change "delta-sigma, ($\Sigma\Delta$)" to -- delta-sigma ($\Delta\Sigma$) --.
- Page 5, line 5: Change "convert" to -- converter --.
- Page 7, line 7: Change "figure" to -- Figure 1 --.
- Page 8, line 1: Change "Digital-To-Analog" to -- digital-to-analog --.
- Page 13, line 13: Change "sinc filter" to -- sync filter --.
- Page 19, line 23: Change "very" to -- which is very --.
- Page 20, line 8: Change "other next stages" to -- next stages --.
- Page 20, line 20: Change "sinc filter" to -- sync filter --.
- Page 20, line 23: Change "sinc filter" to -- sync filter --.

Appropriate correction is required.

Claim Objections

Claims 11 and 22 are objected to because of the following informalities:

- Claim 11, line 1: Change "claim from 10" to -- claim 10 --.
- Claim 22, line 1: Change "computing system" to -- computer system --.
- Claim 22, line 3: Change "analog/digital" to -- analog-to-digital --.

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Claim 22, line 4: Change "analog/digital" to -- analog-to-digital --.

Appropriate correction is required.

Allowable Subject Matter

Claims 1-30 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: the references of record neither reveal nor render obvious estimation of an analog correction signal indicative of the mean value of the quantization error for at least on selected stage in the claimed manner.

Conclusion

This application is in condition for allowance except for the following formal matters:

- 1) Correct the specification, as described above.
- 2) Correct the claims, as described above.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213. A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patents 6,970,125 and 6,867,718 to Cesura et al appear to be related to this application. U.S. Patent 4,051,470 to Esteban et al determines a mean squared error [abstract, line 8] for a quantizer [20].

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick G. Wamsley whose telephone number is (571) 272-1814. The official facsimile number is (571) 273-8300. An alternate facsimile number, (571) 273-1814, should only be used for unofficial documents.


Patrick G. Wamsley

December 15, 2005